

Remarks**A. Status of the Claims**

Claims 1-29 are pending in the application. Claims 1-29 stand rejected by the Examiner. By this amendment claims 1, 15, 22, 24, 26 are amended, and claims 2, 16, 23, 25 and 27 are canceled. No new matter is added.

B. Claim Rejections

Claims 1-29 stand rejected under 35 U.S.C. § 102(e) as being anticipated by, or in the alternative under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 4,834,735 to Alemany, *et al.* ("Alemany"). The Applicants respectfully traverse this rejection and request reconsideration and allowance of the pending claims in view of the following remarks.

1. Alemany does not anticipate claims 1, 3-15, 17-22, 24, 26 and 28-29

A claim is anticipated by a reference only if "each and every element as set forth in the claim is found, either express or inherently described" in the reference. *Verdegaal Bros v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The Office Action alleges that Alemany teaches an absorbent core having the same materials as the Applicants' claimed invention (namely, wood pulp fibers and SAP), and therefore, "Alemany inherently includes a core capable of providing the claimed absorptive capacity." Office Action, pages 2-3. The Applicants respectfully submit that Alemany does not expressly or inherently disclose an absorbent core having a front pad absorbent capacity greater than 32 grams.

In *E.I. duPont & Co. v. Phillips Petroleum Co.*, the CAFC held that "[o]n occasion, particularly with polymers, structure alone may be inadequate to define the invention, making it appropriate to define the invention in part by property limitations." 849 F.2d 1430, 1435, 7 USPQ2d 1129 (Fed. Cir. 1988). In the *E.I. duPont* case, the claims in question recited a polymer having specific structure and specific properties. The court

held that the structure alone was *inadequate* to determine anticipation of a claimed polymer: "the issue is not . . . whether one can get a patent on discovering a new property of an old composition of matter. The issue is whether the claimed copolymer as defined in part by various property parameters, is new." *Id.* at 1436. This logic is equally applicable to the present application, in which an absorbent core produced generally from wood pulp and SAP is disclosed in Alemany, but an absorbent core defined in part by the front pad absorptive capacity is new over what is disclosed in Alemany. While Alemany simply discloses an absorbent pad having a structure comprised of wood pulp and SAP, the absorbent properties that result from the various possible combinations of these raw materials are infinitely variable. Given the teachings of Alemany with regard to the selection of those materials, one could experiment indefinitely without ever obtaining the present invention.

In contrast, the Applicants have unexpectedly found that front pad absorbent capacity of an absorbent article drives the overall product performance. Traditionally, it has been thought that the *total* absorbent capacity of an absorbent core (*i.e.*, absorbent capacity measured over the *entire* absorbent core) is correlated to overall urine leakage of a product during normal use. Indeed, Alemany recognizes this traditional theory, by acknowledging that the "*total* absorbent capacity of the absorbent member 42 should . . . be compatible with the design liquid loading for the intended use of the absorbent article or diaper." Alemany, col. 7, lines 61-64 (emphasis added). However, Applicants have unexpectedly found that products having a *front pad* absorbent capacity of at least 32 grams have low urine leakage results, *regardless* of the absorbent capacity of other regions of the absorbent article, and regardless of the total absorbent capacity of the absorbent article.

Protection against leakage is optimized if the front pad 40 has an average absorptive capacity of at least 32 grams as provided. Notably, the absorptive capacity of the other portions of the absorbent core 6 do not significantly affect the urine leakage results if the front pad 40 total absorptive capacity is at least about 32 grams.

Specification, page 23, lines 16-20. *See also*, Example 2 on page 32, lines 5-14 (in-vivo urine leakage test method); and Figure 6 (in-vivo urine leakage test results). This discovery has led to the ability to design more efficient absorbent cores. *See*, for example, page 24, lines 1-7. Alemany says nothing about the effect of the *front pad* absorbent capacity on overall product performance.

In following with this discovery, the Applicants have further discovered that only a particular subset of material combinations produces an absorbent core having the claimed front pad absorbent capacity of at least 32 grams:

A number of techniques may be used to provide an optimized front pad 40 to improve leakage protection. For example, high AUL SAP may be disposed in the front pad 40 of the absorbent core 6 to provide the desired front pad total absorptive capacity of at least about 32 grams. Alternatively, high concentrations of lower AUL SAP may be disposed in the front pad 40 of absorbent core 6 to provide the desired front pad total absorptive capacity of at least about 32 grams. In one embodiment, the front pad 40 has a higher amount by weight of core composite material than in other areas of the absorbent core 6 to provide the desired total absorptive capacity of at least about 32 grams.

Specification, page 23, lines 21-29. Absorbent cores having a front pad absorbent capacity greater than 32 are not taught by Alemany, nor are they inherently disclosed by the material combinations taught by Alemany. As shown in Example 1 of the present application, Applicants tested the front pad absorptive capacity for several commercially-available and experimental products. While each of the tested products has an absorbent core comprising a mixture of fluff pulp and SAP, as taught by Alemany, only 2 products — the Applicants' own experimental products G and M — exhibit a front pad absorptive capacity of at least 32 grams. Therefore, not all absorbent cores comprising fluff pulp and SAP are necessarily capable of exhibiting a front pad absorptive capacity of at least about 32 grams, as alleged by the Examiner. Indeed, this data clearly shows that the Examiner's assumption in this regard is incorrect.

Independent claims 1, 15, 22, 24 and 26 are hereby amended to incorporate the matter of claims 2, 16, 23, 25 and 27, respectively. The amended claims recite an absorbent core having a front pad is a two inch diameter circle having substantially as its center the insult point of the absorbent core, where the absorptive capacity of the front pad is at least about 32 grams. Alemany does not disclose an absorbent core or an absorbent article having a front pad absorbent capacity greater than 32 grams, nor is this feature inherent in the disclosure of Alemany. Likewise, Alemany does not expressly or inherently disclose a method of making an absorbent article, a method of providing leakage protection in an absorbent article, or a method of designing an absorbent core, where the method involves preparing an absorbent core having a front pad absorbent capacity greater than 32 grams, as recited in claims 22, 24, 26, 28 and 29. Thus, Applicants respectfully submit that claims 1, 15, 22, 24 26 and 28-29 are not anticipated by Alemany. Claims 3-14 and 17-21 depend from claim 1 or claim 15, so Applicants respectfully submit that for at least the same reasons given above, claims 3-14 and 17-21 are also not anticipated by Alemany. Therefore, the Applicants respectfully request that the Examiner reconsider and withdraw the 102 rejections with respect to claims 1, 3-15, 17-22, 24, 26 and 28-29.

2. Claims 1, 3-15, 17-22, 24, 26 and 28-29 are not obvious over Alemany

In the alternative, the Office Action rejects claims 1-29 under 35 U.S.C. § 103(a) as obvious over Alemany. Three criteria must be met to establish a *prima facie* case of obviousness: (1) there must be some suggestion or motivation to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art references must teach or suggest all the claim limitations. See MPEP § 2142 *et seq.* For the same reasons set forth above with respect to claim 1, Applicants respectfully submit that the prior art of record fails to teach or suggest all of the features of the pending claims — specifically, an absorbent core having a front pad is a two inch diameter circle having substantially as its center the insult point of the

absorbent core, where the absorptive capacity of the front pad is at least about 32 grams — and therefore there is no *prima facie* case of obviousness.

The Office Action alleges that

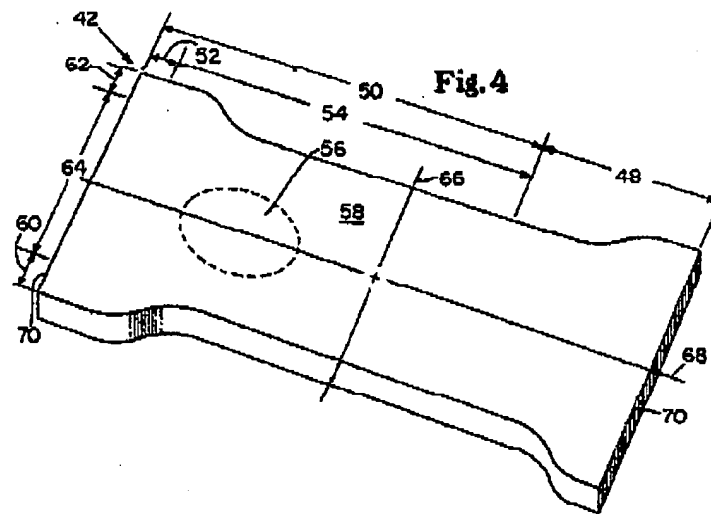
Alemany recognizes the size and concentration of materials of the absorbent core can be varied and this will affect the absorbent capacity in specific regions Alemany, therefore, recognizes the absorbent capacity is a result effective variable of the materials used to makeup the core. It is examiner's second position that it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the article of Alemany with the claimed absorbent capacity, since discovering an optimum value of a result effective variable involves only routine skill in the art.

Office Action, page 3. However, contrary to the Examiner's allegation Alemany specifically does *not* teach or suggest the absorbent capacity of the specific regions, particularly the front pad region. Alemany teaches the total absorbent capacity of the product should be compatible with the requirements of the intended user (*see* Alemany, col. 7, lines 61-64); Alemany further teaches that the hydrophilic fibers and superabsorbent material may be selectively deposited only in the deposition region of the absorbent article (*see* Alemany, col. 11, lines 42-44); and Alemany teaches that to maintain a certain minimal absorbency level in the front section of the core, the surface area of the acquisition zone should be minimized (*see* Alemany, col. 17, lines 13-15). However, unlike the Applicants, Alemany does not teach or suggest the property of a front pad absorbent capacity, nor does Alemany teach or suggest that the front pad absorbent capacity is a result effective variable.

In direct contrast to Alemany, Applicants have unexpectedly found that there is a correlation between front pad absorbent capacity, and urine leakage performance (*i.e.*, an increase in front pad absorbent capacity produces a decrease in leakage rates). *See* Example 2 on page 32, lines 5-14 (in-vivo urine leakage test method); and Figure 6 (in-vivo urine leakage test results). In addition, Applicants have unexpectedly found that products having a front pad absorbent capacity of at least 32 grams have low urine

leakage results, regardless of the absorbent capacity of other regions of the absorbent article, and regardless of the total absorbent capacity of the absorbent article.

Even if the front pad absorbent capacity property were suggested by Alemany, there is no motivation to modify the article of Alemany to have the front pad absorbent capacity of the present invention, because to do so would render the Alemany device unsatisfactory for its intended use. Alemany teaches an absorbent core that has a low density, low basis weight acquisition zone at the insult point of the absorbent article. For illustration purposes, representative Figure 4 of Alemany is reproduced below.



Alemany teaches that the deposition region (54) of the absorbent member (42) comprises an acquisition zone (56) and a storage zone (58). *See*, Alemany, col. 7, lines 10-13 and col. 11, line 63 - col. 12, line 2. The purpose of the acquisition zone (56) is to rapidly acquire fluid from the topsheet. *See id.* at col. 12, lines 63-65. Thus the acquisition zone (56) is preferably positioned in the typical insult area (in Alemany, "the area of typical liquid deposition"). *See id.* at col. 15, lines 20-36. In addition, the acquisition zone (56) has a lower density and lower basis weight than the storage zone (58) or the rest of the absorbent core (42), and has a smaller concentration of superabsorbent particles than the remainder of the core. *See id.* at col. 12, lines 50-53,

col. 14, lines 34-54, and col. 15, lines 54-59. In fact, the acquisition zone (56) could conceivably have a density and basis weight of zero. *See id.* col. 14, lines 65-66. Thus, Alemany teaches that product performance is improved when the acquisition zone (56) contains *less* absorbent material, that is, when the acquisition zone has a *lower* absorbent capacity. As such, increasing the absorbent capacity at the insult point of Alemany device would directly contradict the Alemany device's theory of operation, and presumably render it unsatisfactory for its intended use. Therefore, Applicants respectfully submit that there is no motivation to modify the absorbent article of Alemany to have the claimed front pad absorbent capacity. *See In re Gordon*, 733 F.2d 900, 222 USPQ 1125 (Fed. Cir. 1984).

Independent claims 1, 15, 22, 24 and 26 are hereby amended to recite an absorbent core having a front pad is a two inch diameter circle having substantially as its center the insult point of the absorbent core, where the absorptive capacity of the front pad is at least about 32 grams. Alemany does not teach or suggest an absorbent core or an absorbent article having a front pad absorbent capacity greater than 32 grams, nor is this feature inherent in the disclosure of Alemany. Nor is there any motivation to modify Alemany to have a front pad absorptive capacity as claimed. Likewise, Alemany does not teach or suggest a method of making an absorbent article, a method of providing leakage protection in an absorbent article, or a method of designing an absorbent core, where the method involves preparing an absorbent core having a front pad absorbent capacity greater than 32 grams, as recited in claims 22, 24, 26, 28 and 29. Thus, Applicants respectfully submit that claims 1, 15, 22, 24 26 and 28-29 are patentable over Alemany. Claims 3-14 and 17-21 depend from claim 1 or claim 15, so Applicants respectfully submit that for at least the same reasons given above, claims 3-14 and 17-21 are also patentable over Alemany. Therefore, the Applicants respectfully request that the Examiner reconsider and withdraw the 103 rejections with respect to claims 1, 3-15, 17-22, 24, 26 and 28-29.

PATENT APP. NO. 10/058,065

ATTY. DOCKET NO. 53394.000559

AMENDMENT IN RESPONSE TO 12/1/04 OFFICE ACTION

Conclusion

The Applicants respectfully submit that the application is in condition for allowance. Applicant believes that no fees are necessary in connection with the filing of this document. In the event any fees are necessary, please charge such fees, including fees for any extensions of time, to the undersigned's Deposit Account No. 50-0206. Should any outstanding issues remain, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,
HUNTON & WILLIAMS LLP

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By:

Betsy Johnson
Betsy Johnson
Registration No. 55,305

Hunton & Williams LLP
1900 K Street, N.W., Suite 1200
Washington, D.C. 20006-1109
(703) 714-7627 - direct
(703) 714-7410 - fax